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The Theoretical Foundations and Problematic Areas of the Contemporary Long-Term Financing Theory

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ABSTRACT

The imperative of achieving a growth rate for the Russian economy that meets or exceeds the global average-grounded in the pressing issue of resource availability, particularly financial resources-stimulates significant academic interest in a thorough examination of this challenge. Given that financial resources are essential for addressing structural issues, including the establishment of advanced technological production and investments in infrastructure and human capital, these resources must be of a long-term nature; hence, the term “long-term finance” is frequently used in the literature. The **purpose** of this study is to elucidate the concept of long-term finance, identify the key areas of inquiry associated with it, and delineate the theoretical frameworks necessary for examining its various dimensions. The primary **methods** employed in this study include a content analysis of pertinent academic literature and a critical examination of case studies pertaining to the formation and utilization of long-term financial resources across various countries. **Results:** This study has led to the development of analytical approaches to long-term finance, emphasizing their supply, demand, and the mechanisms that facilitate the alignment of these two dimensions. Specifically, the analysis of the supply of long-term finance includes a critical examination of the concept of global savings glut. The measures that resulted in the freezing of Russian reserve assets undermine one of the primary drivers behind the migration of capital flows towards “safe haven” destinations, potentially affecting the incentives for various entities to accumulate substantial savings. In the analysis of the demand for long-term finance, it is demonstrated that the maturity structure of debt held by firms and governments is determined through a trade-off between the costs and the rollover risks. In the examination of the interaction between the demand on and supply of long-term finance, the critical importance of maintaining the functionality of mechanisms that facilitate the transformation of maturities is underscored. The study identifies five vehicles essential for the effective functioning of long-term finance. Furthermore, it demonstrates that regulatory errors can compromise these vehicles, hindering their capacity to supply the economy with necessary long-term financial resources.

Keywords: savings; investment; capital; financial system; financial markets; interest rates; long-term money; long-term financing; sovereign debt; macroeconomic interdependence

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INTRODUCTION

A theoretical perspective on the definition of “long-term money”

In modern economic science, there is no single, clearly defined theoretical field that summarizes the problems of “long-term money”. Rather, there are separate areas of science where issues correlating with this problem are discussed. Broadly speaking, these areas belong to financial theory (more precisely — public finance, public debt, corporate finance, financial markets, banking) and to macroeconomics (including business cycle theory, economic

growth theory, monetary theory). Since the data in this area cover different research objects, the same can be said about the “long-term money” theory. The object of research here is the economy of individual institutional units — households (as savers), firms and governments (as demanders of financial resources), and the international economy (its subjects, institutions, and organization).

Although the subject of research focusing on the “long-term money” problem can be formulated differently in various works, it contains a common core, for which it is more

accurate to use the term “long-term financing”.¹ By taking the national economy as a whole as the object, the subject matter corresponding to the “long-term money” issue will be its characteristics, which reflect the real processes and conditions of financial resource formation and mobilization, the potential for forming financial resources aligned with national development goals, and so on. Thus, *we associate the concept of “long-term money” with long-term financing resources formed primarily on a market basis, the sources of which are the domestic economy and the external world.*

When addressing this concept, it should be distinguished from the concept of money, given their significant semantic distance. The concept of “long-term money” is revealed thru the category of financial resources and therefore has no relation to money as a universal equivalent of exchange. “Long-term money” does not fulfill the functions of money (measure of value, medium of circulation, means of accumulation, etc.). “Long-term money” is also not a special type of money and is not reflected in any money classifications [1].

The basic criterion for “long-term money” as financial resources is their term.

Different thresholds are used here, but most often resources provided for a period of up to a year are considered short-term, while those provided for a period exceeding 1 year are considered long-term (“long”). Another common threshold is 5 years.

Let’s propose a comprehensive approach to defining “long-term money”. To do this, let’s note that long-term financing is the result not only of accumulating a certain property of savings, but also of forming institutions and mechanisms that harmonize the supply of such savings and the demand for them. Building in part on the “Group of Thirty’s”²

vision of an “efficient and developed long-term financing market”, we will propose our own expanded set of components that make up “long-term money”: (1) household and corporate savings, which constitute the main source of long-term financing to meet the investment needs of the real economy, (2) mechanisms for transforming savings into investments thru banking intermediaries, the capital market, and collective investment schemes (including their infrastructure), (3) cross-border flows of long-term financing, and (4) the long-term financing regulatory system.

The list provided outlines the main directions in which theoretical thought and research methodology concerning the subject under discussion are developing. These directions are detailed and discussed below.

THE SUPPLY OF “LONG-TERM MONEY” IN THE CONTEXT OF SAVINGS RESEARCH

The “long-term money” theory is divided into two approaches: the first focuses on the supply of monetary resources, the second on demand.

The study of the money supply in the economy is projected onto the sources of savings and the development of institutions that facilitate their accumulation. The subjects of these relationships, as well as the institutions that arise in connection with the transformation of savings into long-term investments, are shown in Fig. 1.

Households are considered the dominant source of savings. Macroeconomic theory examines the typical one-act cycle of economic circulation, in which the net disposable income received by households is divided into two parts: that spent on consumption and that left at their disposal as savings. The proportions of this division depend on various conditions and motives — from macroeconomic to behavioral. Macroeconomic conditions are among the most important, especially when it comes to

¹ It should be noted that the concept of “long-term money” is not found in English-language academic literature; instead, expressions such as long-term finance, long-term financing, long-term saving, long-term investment sources, and long-term funding are used.

² Longterm Finance and Economic Growth. Washington, DC: Group of Thirty; 2013. URL: [https://www.drsc.de/app/](https://www.drsc.de/app/uploads/2017/03/17_04d_IFRS-FA_long-term_investment_Group_of_Thirty.pdf)

[uploads/2017/03/17_04d_IFRS-FA_long-term_investment_Group_of_Thirty.pdf](https://www.drsc.de/app/uploads/2017/03/17_04d_IFRS-FA_long-term_investment_Group_of_Thirty.pdf) (accessed on 15.01.2025).

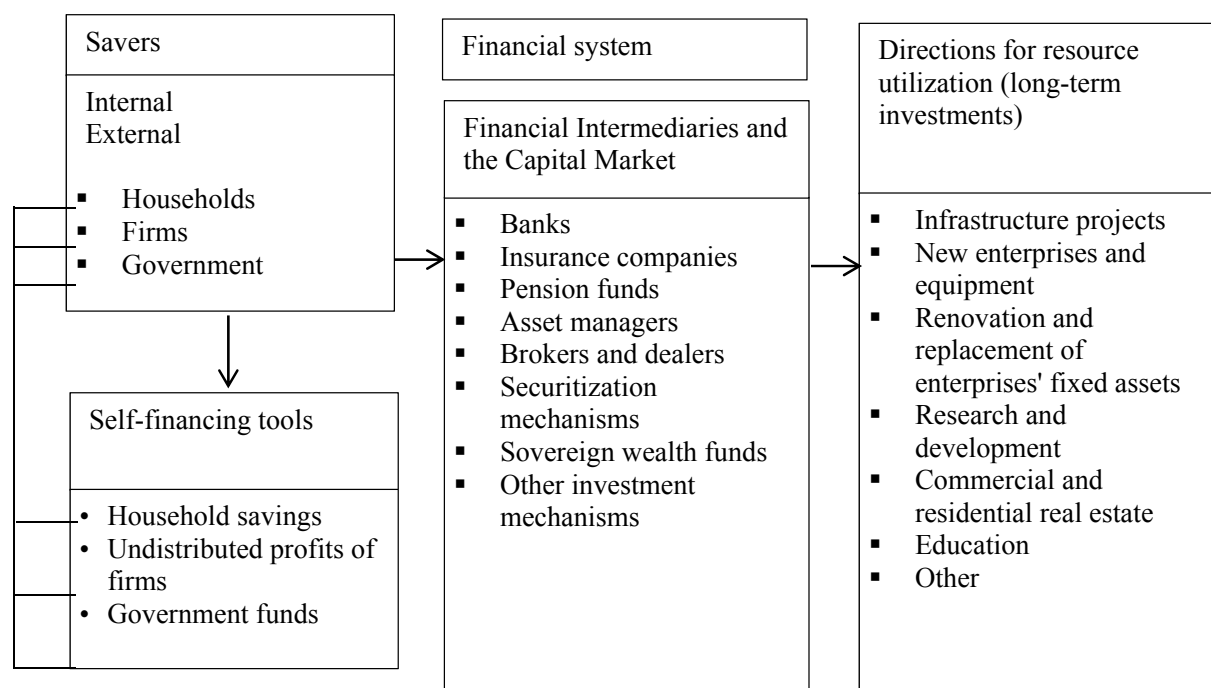


Fig. 1. Counterparties and Mechanisms of the Long-Term Financing System

Source: Author's development.

households' willingness to make long-term savings. It is crucial to be confident that such savings will provide the deferred consumption required. From this, the decisions made will depend on a number of parameters, the main ones being inflationary expectations, expectations regarding the yield on savings, confidence in maintaining the source of income, and an assessment of the reliability of the financial institution acting as the conduit for long-term savings.

One of the central subjects in the analysis of savings is saving behavior. Modern savings theory makes a significant contribution to the theory of "long-term money", revealing the characteristics of household savings behavior and analyzing the influence of various factors and driving forces on it. These include macroeconomic factors (income level and dynamics, inflation, inflation expectations, interest rate level and expectations, business cycle phase), uncertainty factors (largely correlated with macroeconomic factors, but also dependent on political and other conditions), cultural factors (education, level of financial literacy, etc.), as well as specific

properties of economic behavior that manifest as individual time preferences, risk attitudes, which influence the savings horizon, the degree of discounting of future income streams, and the willingness to take risks.

Recent studies show that the study of saving behavior is linked to the study of a country's demographic conditions and gender structure. This is explained by the fact that such behavior varies significantly across different categories of families/households: single-person households; single-parent families with a child; childless families; two-parent families with children; female-headed households; large families; young families; households headed by elderly people, etc. An analysis conducted by Bank of Russia experts, based on data from the longitudinal survey "Financial Behavior of Russian Households",³ revealed the following characteristics of savings formation in Russia. The likelihood of savings formation by female-

³ See: Bank of Russia. All-Russian household survey on consumer finances. URL: https://www.cbr.ru/ec_research/vserossiyskoe-obsledovanie-domokhozyaystv-po-potrebitel-skim-finansam/ (accessed on 15.01.2025).

headed households is lower among all age groups (especially when women are over 40 years old); the likelihood of single-person Russian households having savings is lower compared to other types of households. The authors of the report conclude that Russia is facing a growth in the “group of the population characterized by a short planning horizon and a high degree of discounting the future” [2]. Similar research findings on savings are important for determining the parameters and tools of economic policy. Specifically, strategies to encourage savings will be effective if they take into account the characteristics and habits of households.

Another important area of research when analyzing household savings is the distribution of savings among categories of citizens who differ in terms of disposable income level and accumulated wealth. Modern research in this field revolves around the concept of a *global savings glut theory*. In its original framework, traced, for example, in the works of B. Bernanke [3] and L. Summers [4], this concept explained important externalities of savings growth in certain countries against the backdrop of a current account surplus and targeted flows of these savings into safe assets, primarily US Treasury debt and other high-rated dollar-denominated bonds. The most important of these externalities was cited as the reduction and sustained maintenance of interest rates at low levels worldwide.

Initially, the emergence of excess savings was linked to an aging population. This phenomenon in several emerging market countries (the most striking example being the People’s Republic of China) and a number of industrialized countries has transformed these countries from net borrowers in international capital markets into net creditors [5]. Later studies revealed the following characteristics. Firstly, the inflow of funds into safe assets in the US in recent decades has been explained not only by capital movement from abroad, but also by purchases by residents, primarily thru the expanding savings of the wealthiest 1% of citizens and households [6]. Secondly,

the inflow of capital into the US from other countries was also ensured by the savings of the wealthy in those countries [7], which implies that the global savings surplus and the savings surplus of the wealthy are interconnected [8]. All of this is consistent with the position that the propensity to save increases with rising income inequality, while the propensity to consume decreases [4]. It should also be added that, at least in the US, the savings of the bottom 90% of the population have significantly decreased since the early 1980s to the present day [6].

Considering these results in the context of our subject, we note that the *source of “long-term money” is primarily concentrated in the savings of the wealthiest segment of the population*. In terms of policy, this implies two main strategies. One of these could involve encouraging the use of these savings in riskier long-term assets (reorienting the change in the savings structure toward riskier assets). Another could be based on the idea of reducing income inequality and gradually equalizing the savings rates of the wealthiest and the rest of the population. Given the findings that rising inequality contributes to increased savings because wealthy citizens have high savings rates [9, 10], this recommendation is aimed not so much at increasing savings as at making the system more sustainable and growth-oriented.⁴

The second most significant sector that saves is business. Corporate finance theory and macroeconomics traditionally view private companies not as suppliers of financial resources, but as an institutional unit that demands them. However, the development of financial markets, which allows for the blurring of maturity boundaries thru money market mechanisms, fluctuations in firm leverage, and the phenomenon of firms building up large holdings of liquidity

⁴ Indeed, as shown in a deep study by Mian et al. [6], “significant increases in inequality generate excess savings among the wealthy, which can trap the economy in a debt trap characterized by low interest rates, high debt levels, and output below potential”.

and financial assets, has recently renewed academic interest in studying firms as savers.

Typical corporate behavior involves “absorbing” savings accumulated by other institutional units to make investments that help companies implement their strategies and achieve their goals, although some companies may also engage in regular saving. Let’s first consider the funds needed to keep the business running, cover its current expenses, and create reserves for self-insurance. Companies keep them in their own current accounts or invest them in the money market, and they can only be classified as savings with significant reservations. While the potential of such liquidity for use as a resource for long-term financing is initially quite limited, the improvements in money market mechanisms observed in recent years allow for the methodical redirection of these funds to borrowers by continuously rolling over their obligations. Thus, the money market in its current technological format, using short-term financial contracts, essentially contributes to the blurring of maturity boundaries, influencing the financial models of players in both the financial and real sectors.

In a stricter sense, corporate savings represent long-term resources, often serving strategic purpose, as they provide funds for investment projects, and for financing transactions in the market for corporate control, such as mergers and acquisitions of other firms [11]. Since the main source of such savings is undistributed profits, corporate savings have a significant disadvantage: they are procyclical [12]. Beside the business cycle, the determining factor in the dynamics of such savings is the stability of fiscal conditions, the easing/tightening of which significantly impacts companies’ potential to increase savings.

The size and dynamics of corporate savings are highly dependent on the industry in which the company operates. High-tech sectors that invest significantly in research and development stand out here. The higher such

expenses, the higher the value of company savings turns out to be [13]. A different logic for explaining the excess savings of companies in the high-tech sector was proposed by L. Summers [4]. She relies on the opinion that IT-related companies have a lower demand for capital. The increase in the share of such firms in output, along with the observed decline in the potential for innovation to boost productivity, is causing a reduction in the demand for investment in fixed capital and, while maintaining high profitability in the IT business, is leading to an increase in corporate savings.

Reliability of the company should be considered an important factor in corporate savings. Since external financing is more accessible for firms with higher credit ratings, it may not be advantageous for them to hold significant assets in the form of cash and financial investments. However, the actual situation with corporate savings in recent years has been different, contradicting the logic outlined. Giant corporations like Apple, Amazon, Microsoft, and others, with high credit ratings, accumulate savings and hold a significant portion of their total assets in liquid form [14]. This phenomenon is attracting corresponding research interest, in its own way complements the concept of a global savings glut [15]⁵ and enriches the theory of “long-term money”.

Recent empirical studies show that the phenomenon of excessive corporate savings extends not only to the largest high-tech companies but also to players in other industries. An important addition to the emerging picture is provided by an analysis applied to Japan and the Federal Republic of Germany. It turns out that there is no increase in household savings in these countries, despite the fact that a significant factor contributing to this — the aging population — is very pronounced. Instead, business savings are growing. This significantly impacts

⁵ In this projection, this concept is interpreted as an excess of corporate savings (corporate savings glut).

the savings model, making it shorter-term oriented (as a substantial portion of corporate savings is invested in money market funds), and also (considering corporations' preference for investing in bonds, mainly corporate bonds) [15] on the growth of the debt-to-equity ratio.

New research shows that in recent years, in addition to liquidity motives, there has been a growing desire among the largest non-financial companies to realize their advantages in financial asset management thru the use of cross-border tax incentives. At the same time, in Russia, against the backdrop of existing external restrictions, unstable macroeconomic conditions, and changing tax legislation, corporate savings often play the role of insurance funds, as well as a manifestation of a wait-and-see strategy, reflecting current uncertainty about the prospects for investment programs.

The third saving entity we are considering is the outside world. Views on the role of foreign investors as liquidity providers for national markets differ significantly. Within the framework of the global savings glut concept, according to B. Bernanke and other scholars, economies, primarily developed ones, have been operating at a lower average interest rate for the last three decades. At the same time, the benefits of the global savings surplus are clearly distributed unevenly around the world. The United States is the most successful in using them, although this country has also experienced negative consequences from global imbalances [16] (a chronic US current account deficit, while its largest trading partners have a surplus). Between 2003 and 2006, this led to the formation of a bubble in the American real estate and mortgage-backed securities markets [8]. Finally, it is necessary to note that the blocking sanctions imposed in 2022 on the Bank of Russia's foreign exchange reserves and the assets of the Government of the Russian Federation in US dollars undermine the basis of the processes interpreted as a global

savings glut, as investments in American financial instruments are losing their status as a "safe haven". In this situation, countries generating excess savings may reconsider their view of safe assets and even change their savings strategy, reducing the supply of savings in the global market.⁶

The debate about the role of external savings and foreign investors is evident in connection with the analysis of the results of the large-scale financial liberalization of the 1970s-1990s [17]. During this era, governments in a large number of countries implemented reforms that included opening up their capital account and liberalizing the conditions for foreign portfolio investors to participate in their domestic financial markets. Unfortunately, this policy was not well thought out. Weak national capital markets, unreliable banking systems, vulnerable foreign exchange markets, and corrupt elites have been the basis for numerous cases where capital account openness has led not only to the desired inflow of foreign investment but also to increased volatility in financial and foreign exchange markets and has become one of the causes of deep crises.

The most recent studies, based on a wider range of available data, have allowed for a re-evaluation of the place and role of foreign portfolio investors for the host economy. Foreign investors, due to their portfolio diversification capabilities, are more likely to hold long-term domestic debt and equity than resident investors.⁷ This conclusion should be supplemented by the following conditions: the country has a sufficiently mature financial market with the appropriate infrastructure; the government's efforts are clearly aimed at upholding and protecting investor rights. Russia's case, in general, fits this model and

⁶ O'Neill J. The end of the global savings glut theory of low-interest rates. Project Syndicate. Apr 4, 2022. URL: <https://www.project-syndicate.org/commentary/end-of-global-savings-glut-sanctions-inflation-by-jim-o-neill-2022-04>

⁷ Global Financial Development Report 2015/2016: Long-Term Finance. Washington, DC: World Bank; 2015. <http://hdl.handle.net/10986/22543> (accessed on 21.01.2025).

shows that the outflow of foreign capital and the freezing of assets that occurred in 2022, which led to the isolation of the Russian market and marked its fundamental structural changes,⁸ were one of the most important reasons for the negative dynamics in the government and corporate bond market and the increased volatility in the stock market. In our view, this is because foreign investors were not just one of the participants, but a necessary institution of the internal capital market, filling the niche of demand for assets, which provides independent professional expertise in the market, helps eliminate information asymmetries, and consistently and firmly defends the interests of debt instrument investors and minority shareholders.

Finally, governments are among the entities that engage in long-term savings. Here, as with corporations, it should be noted that the “standard” model of behavior views governments as pure consumers of financial resources. Cases where governments save money are characteristic of some countries with a sustained current account surplus that implement policies based on a fiscal rule that provides for the creation of long-term government reserves in the form of sovereign wealth funds. These funds play a significant role in ensuring macroeconomic stability, but their role as a source of resources for domestic investment may be limited (depending on diversification requirements).⁹

⁸ While foreign investors dominated the Russian stock and derivatives segments in 2020–2021, accounting for approximately 47% and 48% of the turnover of these markets, respectively, and ranking 2nd or 3rd in terms of turnover in the debt securities market with a share of about 15%, foreign investor activity ceased in subsequent years; at the same time, the role of retail investors increased, whose share, particularly in the stock market, currently fluctuates around 75%. See: Investor Presentation, December 2021. Moscow Exchange, 2022. URL: <https://www.moex.com/s865> (accessed on 21.01.2025); The number of private investors on the Moscow Exchange has exceeded 35 million. Press Release. Moscow Exchange, 2025. URL: <https://www.moex.com/n76900> (accessed on 21.01.2025).

⁹ A more detailed examination of the theoretical aspects of sovereign wealth fund management has been omitted due to the paper's length limitations.

DEMAND FOR “LONG-TERM MONEY”: THEORETICAL AND METHODOLOGICAL PROBLEMS

The demand for financial resources, including long-term ones, comes from the corporate sector, the household sector, and the government.

Corporate financing. External financing is an integral part of the business model that allows companies to be created, grow, and maintain their competitiveness. By demanding financial resources, companies offer their obligations in return, in the form of debt, equity, or hybrid instruments. Within the framework of corporate finance theory, a deep methodology for researching capital structure has been developed, meaning the ratio of self-financing to external financing and determining preferences for choosing specific financing instruments, primarily common stock or bonds. Thus, the subject of research that the works of F. Modigliani and M. Miller [18] drew attention to touches upon the problems of external financing and the contribution of instruments with different maturities to this financing.

Discussions surrounding the patterns of capital structure formation in companies have evolved as theoretical constructs have become more complex (weakening initial assumptions about the insignificance of institutional frameworks, information asymmetry, and transaction costs, as well as tax conditions¹⁰) and as the results of empirical studies have accumulated. Let's turn to some of the latest similar results. Claassen et al. found that when companies seek external financing for new projects or aim to achieve target capital structure ratios, they primarily resort to debt instruments. Analyzing US corporate sector net capital inflows and outflows from 1946 to 2019, the authors find that the supply of corporate debt is much more elastic than the supply of equity: changes in corporate equity average minus 0.6% per year with a standard

¹⁰ See hierarchy theory (pecking order theory), trade-off theory, and financial market friction theory.

deviation of 2%, while changes in corporate debt average 7.9% with a standard deviation of 4.3% [19]. Thus, over a long historical horizon, there has been a decrease in capital raised thru stock issuance, which, against the backdrop of good IPO statistics, is a consequence of even larger share buyback figures. At the same time, the role of bonds is growing.

While raising funds thru the issuance of shares is unequivocally classified as attracting “long-term money”, a more granular classification is applied to debt financing. Companies raise funds both on a short-term and long-term basis. A significant question here is what the motives are for raising funds for different terms. The simplest answer to this question is the allocation of the funds raised. Short-term debt is appropriate for replenishing working capital, while long-term debt is suitable for financing the creation of fixed assets (capital investments). Attracting long-term debt is often associated with the need to finance large projects with long payback periods.

Additionally, it's important to consider the risks arising from the borrower or issuer. Since the terms offered by the market dictate the need for debt extension, companies are forced to take on this risk. In this sense, long-term financing allows the borrower to reduce the risk arising from extension [20]. This risk is almost entirely related to the probability of interest rate changes. Indeed, market conditions during the period required for the company to implement a project financed with borrowed funds may change and become more stringent than at the project's outset [21]. Furthermore, if firms relying on short-term debt to implement long-term projects face credit or financial crises, they experience extremely tight financial constraints, which can lead to forced restructuring, project delays, and bankruptcies, resulting in significant negative effects on the real economy [22].

The evolving structure of external resource attraction terms is largely a consequence of the development of the domestic financial market and companies' practice of accessing

external markets. Using its own credit system and issuing domestic bonds create a basis in the economy for covering the demand for credit from borrowers, but in the case of emerging markets, the maturities are shorter than when issuing bonds on international markets [20].

An empirically observed pattern is that debt maturities increase as a larger share of debt in the economy is held by the bond market and the practice of syndicated lending expands. Another pattern concerns small firms that do not have access to a wide range of long-term external financing alternatives to pursue investment opportunities. This involves developing special mechanisms for access to finance for such players — from creating stock exchange platforms specializing in SMEs to promoting non-mortgage securitization.

Household financing. Although households in most countries have been net savers for most of history and therefore providers of financial funds for the entire economy, there are components within their life cycle that require long-term financing, which is covered by external sources. First and foremost, this concerns housing finance.¹¹

The issue of housing finance is addressed in extensive literature. Most modern research is united by the understanding that the limitations of household savings, rising housing standards, the inability to meet the demand for appropriate credit thru standard banking products, and other features necessitate the development of mortgage financing mechanisms. V. M. Polterovich and O. Yu. Starkov traced the evolution of mortgage institutions, starting from the end of the 18th century. The authors showed that “with increasing prosperity, decreasing income differentiation, growing propensity to save, strengthening the rule of law, and a decrease in interest rates and banking margins” [23], the organization of the mortgage market shifts from an “accumulative” model (building

¹¹ Some other funding areas are also included here — for education and for purchasing cars. We are omitting their consideration due to the limited scope of the paper.

societies, savings and loan associations) to a debt-based model built on a two-tiered structure with securitization, where the borrower's risk is distributed among a potentially large number of investors in liquid, high-rated bonds, and the final cost of the loan for the borrower is significantly reduced.

Financing government expenditures. The state forms a significant portion of the demand for long-term financing. This demand is largely determined by the state's participation in infrastructure development and the implementation of large-scale projects in specific sectors where private business participation may be limited due to high capital intensity and risks (space exploration, nuclear industry, etc.). Such costs are covered in a budget deficit situation by establishing special mechanisms for protecting and encouraging capital investments (SPI) [24], as well as thru the issuance of government bonds. In this section, the problem of "long-term money" transitions into the problem of public debt and its management.

The issues addressed in this context partially overlap with those considered when studying corporate debt. This concerns, for example, a compromise in determining the urgency of obligations, the essence of which is as follows. Since normal yield curves slope upwards, the government could reduce its borrowing costs by shortening the maturities of new bond issues. However, such a reduction increases the risks of extension (refinancing) [25]. The threat of a rollover crisis motivates the government to prefer issuing "long" obligations, even if the interest rate on them is higher. However, this may conflict with investors' aversion to market risk (bond price fluctuations), who often prefer to buy short-term bonds.

Attracting long-term debt becomes more challenging during crisis periods as investors demand an additional premium. In this situation, it might be more advantageous for the government to issue short-term debt, despite the risk of rollover, thereby reducing the average cost of servicing it in the long-term [26]. However,

outside of crisis periods, a long-term debt issuance strategy proves to be the most justified, allowing, above all, for a reduction in debt levels in the long-term [27].

It should also be noted that issuing only long-term bonds leads to uneven debt service payments. Short debt helps compensate for this by aligning service payments with tax revenues.

RESEARCH QUESTIONS ON THE INTERACTION OF DEMAND AND SUPPLY OF "LONG-TERM MONEY"

Despite the fact that the study of the "long-term money" problem was divided above into approaches addressing the demand and supply of financial resources, the most important question is how this market forces interact. In this context, it should be noted that the *term structure of such resources in a market economy is the result of risk distribution between the parties to financial contracts* — lenders (investors) and borrowers (issuers).

Therefore, the answer to the question of how much (and whether there is enough) "long-term money" in the economy involves not only an assessment of, for example, savings themselves, even if enhanced by an analysis of the legislation and infrastructure that ensure their accumulation, but also an assessment of the methods and components of the risk distribution system. This significantly determines the structure of the methodology for the theory of "long-term money", focusing research on areas such as the availability and effectiveness of interest rate risk transfer mechanisms, credit risk redistribution, the quality of the banking liquidity management system, and others.

The fundamental issues in the aspects addressed are the formation of economic mechanisms for transforming deadlines (see Fig. 2). The widely cited works of D. Diamond, P. Dybvig [28, 29], and other authors reveal the secret of how banks transform short-term liabilities into long-term assets. The same function belongs to highly liquid capital markets, which allow investors to freely dispose of their savings, thereby supporting the long-term

Banks	They specialize in creating private information about borrowers; stability is maintained thru strict regulation (including capital requirements), a deposit insurance system, and liquidity support tools
Life insurance companies and pension funds	They have a relatively more balanced structure of liabilities and investments (assets), but the demand for their products is highly dependent on the government's ability to create favorable and stable macroeconomic conditions
Mutual funds	They are relatively less sensitive to the balance of the term structure, but dependent on the liquidity of the capital market
Private equity funds	They specialize in creating private information about borrowers (a young and growing business); they are sensitive to the business cycle and monetary policy tightening, and are limited in terms of diversification
Mortgage pools	They accumulate long-term obligations of borrowers on mortgage loans, securitize these long-term obligations into shorter and more liquid assets in the form of bonds

Fig. 2. Economic Mechanisms of Maturity Transformation

Source: Author's development.

investments of companies that offer their bonds and equity as liabilities [30].

A significant technology among those considered in Fig. 2 is securitization. It allows not only for the transformation of terms, harmonizing the preferences of borrowers and a wide range of investors, but also for the distribution of risk to reduce the cost of credit.

Among the financial institutions presented in Fig. 2, the longest liabilities are accumulated by non-governmental pension funds and life insurance companies. Macroeconomic conditions and regulations related to their asset operations are crucial in filling such institutions with liabilities. The practices of various countries (particularly Germany, Chile, and Russia) show that the regulations being introduced, aimed at ensuring the safety of funds accumulated by these institutions, can in fact simultaneously disincentivize these players from making long-term investments.¹² Thus, regulatory errors in this sector cause a shift in investment goals toward less risky investments

that provide more stable short-term returns, while a very small portion of the portfolio is left for more profitable long-term investments, as they are found to be more volatile.

In conclusion, let's consider the main aspects of the long money problem. Let's analyze how they relate to various theories and concepts discussed in scientific research and academic discussions (Table).

CONCLUSION

Modern "long-term money" theory is composed of a large arsenal of theoretical approaches and concepts, united by a focus on solving the problem of long-term financing. In the presented study, two approaches to defining long money were proposed. The first, narrow one, focuses on long-term financing resources as its main subject of study. The second, comprehensive, considers long-term investments in a broader context. It includes an analysis of their sources, mechanisms for conversion into long-term investments, and regulatory systems.

The unveiling of the theoretical foundations of the "long-term money" proposal has revealed several promising avenues for analysis —

¹² Global Financial Development Report 2015/2016: Long-Term Finance. Washington, DC: World Bank; 2015. <http://hdl.handle.net/10986/22543> (accessed on 21.01.2025).

Problematic Areas and Theoretical Directions for the Study of Long-Term Finance

Problematic areas	The principal theoretical directions of research and discussions
Supply of long-term financing	
Household savings behavior: long-term factors and drivers	Theory of household financial behavior theory
	The concept of a “global savings glut”
	The concept of preferring a “safe haven”
Distribution of accumulated financial wealth	The concept of a “global savings glut among the wealthy”
Firms' saving behavior: long-term factors and motives	Concepts of savings as a source of investment resources for firms
	Concepts of savings as a source of financing corporate control transactions
	The concept of “global corporate savings glut”
Foreign investor behavior: strategies, motives, long-term factors influencing national markets	Discussion on the long-term impact of foreign investors on national markets
The role of the collective investment industry, factors and conditions for its development	Theory of maturity transformation in the context of the collective investment industry
	Concepts of incentive alignment in the interaction of parties to financial contracts
Demand for long term funds	
Corporate capital structure: long-term factors and patterns	Theory of capital structure and sources of capital investment financing
	Concept of preferences for the choice of long-term financing instruments
	Concepts of dominant sources of financing applied to different categories of companies
Structure of firms' external resource attraction terms and its factors	Concept of the role of macroeconomic factors and long-term financing conditions
	Concept of the role of the domestic financial market and international financing
	Concept of the role of institutional factors in the formation of long-term financing
	Theory of special purpose vehicles for accessing finance (securitization)
Problem of housing finance	Theory of mortgage financing mechanisms
Problem of public debt	Theory of public debt management
The interaction of supply and demand for long-term money	
Structure of financial contract terms	Theory of risk distribution between parties to contracts
	Theory of economic mechanisms for transforming the terms of financial contracts
	Concept of transformation thru securitization

Source: Compiled by the author.

macroeconomic, including the fascinating field of international finance, and behavioral. It is shown that the central conditions for creating a supply of “long” money in the national economy are price stability and confidence in the reliability of financial institutions. At the same time, according to the “global savings glut” theory, international economic integration plays an important role, creating extra savings whose flows are directed primarily toward assets considered “safe havens”, exerting downward pressure on interest rates worldwide. Additionally, it is noted that the source of “long money” is primarily concentrated in the savings of the wealthiest segment of the world’s population. In the analysis of household saving behavior, the importance of time preferences and risk attitudes is highlighted, which in turn are significantly influenced by the gender and age structure of the population. An analysis of the corporate sector reveals a savings glut effect in a number of sectors. It is particularly pronounced in relation to the largest IT companies, as well as countries whose businesses are experiencing growth limitations. Important conclusions drawn from research on the role of foreign capital as a source of financial resources are that, despite its speculative nature, the long-term effect of the presence of foreign investors is positive and oriented toward long-term results.

The theoretical foundations of the demand for “long-term money” largely stem from the extensive discussion regarding the firm’s

capital structure. The modern view relies more on in-depth empirical research, which shows a weakening role for stocks, with net issuance being negative in developed economies in the long term, while the importance of debt instruments is growing. The choice of maturity for both corporate and government debt is decided thru a compromise between cost (longer-term debt is generally more expensive) and rollover risk (short-term debt, which requires refinancing, carries a significant interest rate risk).

An important part of the theoretical framework for the study of “long-term money” relates to the interaction between the supply and demand for long-term financial resources. The main focus here is on developing and maintaining the functionality of maturity transformation mechanisms. The paper identifies five such mechanisms. It is shown that regulatory errors can disrupt the functionality of such mechanisms, preventing them from working to provide the economy with “long-term money”.

The paper systematizes the problem areas and theoretical directions of research on “long-term money”. This helps guide research and shape the program for further action. The most promising research is that which addresses the problems of “long-term money” thru risk distribution. Policies aimed at addressing this problem should reduce risks and align the incentives of participants in financial relationships.

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